

Title (en)

Method and composition for preparing medical instruments

Title (de)

Verfahren und Zusammensetzung zur Aufbereitung medizinischer Instrumente

Title (fr)

Procédé et composition de préparation des instruments médicaux

Publication

**EP 2617867 B1 20220309 (DE)**

Application

**EP 13000319 A 20130122**

Priority

EP 12000395 A 20120123

Abstract (en)

[origin: EP2617866A1] Reinforcing passive layer on surface of a chromium-containing steel by increasing chromium and iron ratio in the passive layer and/or increasing the passive layer thickness, comprises (i) cleaning the surface, and (ii) contacting the surface of the steel with an acid-containing aqueous solution, where the acid comprises maleic acid, maleic anhydride, maleic acid half-ester, itaconic acid, itaconic acid half-ester or water-soluble copolymer of maleic acid, maleic anhydride or itaconic acid, and the step (i) is optionally carried out before the step (ii) or simultaneously with the step (ii). Independent claims are also included for: (1) treating the surface of the chromium-containing steel, comprising (a) cleaning the surface, (b) contacting the surface with the acid-containing aqueous solution and/or an oxidizing agent, and (c) disinfecting the surface; (2) the acid-containing aqueous solution; (3) a device for reinforcing the passive layer on the surface of the chromium-containing steel, or for treating the surface of the chromium-containing steel, preferably a dishwasher or a cleaning- and disinfection unit, comprising the acid-containing aqueous solution and/or the oxidizing agent; and (4) a medical instrument comprising the surface of the chromium-containing steel, which is a part of the medical instrument or is formed as the medical instrument, and is treated by the above methods, or the surface of the chromium-containing steel having a passive layer, where the chromium and iron ratio in the passive layer is  $\geq 1$  or  $\geq 1.5$ , which is measured through a layer thickness of the passive layer of 8 nm.

IPC 8 full level

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CPC (source: EP)

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Citation (examination)

- WO 2008107082 A1 20080912 - POLIGRAT GMBH [DE], et al
- LEE V KREMER: "Improvements in passivation using citric acid formulations", MEDICAL DEVICE MATERIALS, PROCEEDINGS FROM THE MATERIALS & PROCESSES FOR MEDICAL DEVICES CONFERENCE, ANAHEIM, CA, UNITED STATES, SEPT. 8-10, 2003, ASM INTERNATIONAL, USA, 1 January 2003 (2003-01-01), pages 87 - 90, XP009101025, ISBN: 978-0-87170-798-7

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